

Our Ref: AA-18 Rev A

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Copy: [Amiga Homes ' David Stone](#)
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3rd February 2022

Dear Mr. Hill,

Re: 6 Houses, Sefton Road, Bognor Regis
Thermal Calculations - Part L1A of the Building Regulations

Further to your Instruction, we enclose SAP Design Calculation reference AA-18-01 to 06. The SAP Calculations confirm compliance with both the Target CO₂ Emission Rate and the Target Fabric Energy Efficiency (TFEE) rate, all in accordance with Approved Document L1A (2013 edition).

Regarding Planning Condition No. 6, we confirm that the construction methods and low energy heating technology will satisfy the requirements for:

(a) at least 10% of the energy supply of the development will be secured from decentralised & renewable or low carbon energy sources (as described in the glossary at Annex 2 of the NPPF). The development will be implemented in accordance with the approved details and retained as operational thereafter.

All matters relating to sound insulation will also be complied with.

Attached is a Construction Specification showing the insulation levels and heating system assumed. Please note the following:

1)	Ground floor insulated with 100mm Kingspan Kooltherm K103.
2)	External walls cavity walls insulated using 100mm Rockwool full fill.
3)	Windows and glazed doors to have an average U-value of 1.5.
4)	Thermal bridging junctions to be constructed in accordance with the Aircrete Constructive Details for full cavity fill.
5)	A design air permeability of 4.5m ³ /h/m ² to be confirmed by air pressure testing.
6)	Heating and hot water from an air source heat pump. A model can be selected from the SAP Appendix Q Database. Alternatively, the heat pump installation should be supported by an MCS certificate.
7)	System 1 ventilation including extract fans to wet rooms. If different please advise and provide details.

Additional Services

Therm Energy services also include on-site testing for Air leakage & Extract Fan performance and Acoustic testing of party walls and floors.



Please ask for a quote

Should you have any queries, please do not hesitate to contact us.

Yours sincerely

A solid black rectangular box used to redact the signature of Colin Marshall.

Colin Marshall SAP Assessor

1. Construction Specification for Part L1A (2013) Compliance			
Project:	Date:	Our ref:	Version
6 Houses, Sefton Road, Bognor Regis PO21 3EE	3 rd February 2022	AA-18	Rev A
1. Construction and insulation			
Element			U-Value (W/m ² K)
<u>a) Ground floor</u> 75mm screed on 100mm Kingspan Kooltherm K103 or similar on a beam and block concrete floor.			0.14 - 0.15 depending on P/A
<u>b) Exposed floor e.g. over Entrance Plots 2 and 3</u> 200mm mineral wool quilt between joists, 12.5mm plasterboard finish.			0.24
<u>c) External wall 'facing brick</u> Facing brick, 100mm Rockwool full fill, 100mm Toplite Standard or similar, 12.5mm plasterboard on dabs.			0.27
<u>d) External wall 'render</u> Render on 100mm medium density block, 100mm Rockwool full fill, 100mm Toplite Standard or similar, 12.5mm plasterboard on dabs			0.26
<u>e) Roofs - horizontal ceilings</u> 100mm mineral wool quilt between joists, 250mm mineral wool quilt cross-laid over joists, 12.5mm plasterboard finish.			0.12
<u>f) Roofs 'sloping ceilings</u> 100mm Kingspan Kooltherm K7 between rafters, 52.5mm Celotex Kingspan Kooltherm K118.			0.18
<u>g) Windows</u> UPVC framed double-glazed, low E glass, minimum 16mm airgap between panes. Note 'Manufacturers' confirmation of the U-value performance to be provided upon completion.			1.5
<u>h) Glazed folding or Patio doors</u> UPVC framed double-glazed, low E glass, minimum 16mm airgap between panes. Note 'Manufacturers' confirmation of the U-value performance to be provided upon completion.			1.5
<u>i) Single solid or half-glazed doors</u> Timber solid doors.			1.6
<u>j) Air tightness</u> A design air permeability of 4.5m ³ /h/m ² to be confirmed by air pressure testing.			

Note - Therm Energy can provide Air Leakage Testing.

k) Thermal Bridging Junctions

Thermal bridging junctions to be constructed in accordance with the Aircrete Constructive Details for full cavity fill.

2. Heating and Ventilation

a) Main Heating System

Using an air source heat pump. A model can be selected from the SAP Appendix Q Database. Alternatively, the heat pump installation should be supported by an MCS certificate.

b) Water Heating

From main heating. A 200-250-litre hot water cylinder assumed, located in a heated space, with cylinder stat and a standing heat loss of 2.1 to 2.4Kwh/day. Hot water timed separately. All primary pipework insulated.

c) Heating Controls

Fully independent time and temperature zone control by a suitable arrangement of plumbing and electrical services.

d) Secondary Heating

None assumed.

e) Ventilation

System 1 ventilation including extract fans to wet rooms.

3. Other energy related issues

a) Lighting (internal)

100% low-energy light fittings in accordance with Part L1A.

b) Electricity Tariff

Standard Tariff.

4. As-Built SAP and EPC - 6 Houses, Sefton Road, Bognor Regis PO21 3EE This section is to be completed when the final SAP and EPC are required upon completion of the dwelling(s).

(1) Has there been any changes to the specification above (list changes above, or state "no changes"

Signed :

Date ;

Name ;

Job Title / Role :